

## **WHAT IS CLAIMED IS:**

1. A method for accelerating 2D graphics in a computer system, the computer system including a graphic chip having a command register to execute graphic commands, each graphic command having operation of source pixel, pattern or destination pixel, the computer system using a graphic device interface (GDI) to transfer corresponding graphic command to a 2D graphic device driver, the 2D graphic device driver setting the command register of the graphic chip based on the graphic command transferred by the graphic device interface (GDI) such that the graphic chip performs the graphic command with respect to the command register set by the 2D graphic device driver, the method comprising:

a graphic command receiving step, which uses the 2D graphic device driver to receive the graphic command from the graphic device interface (GDI);

15        a graphic command determining step, which uses the 2D graphic device driver to determine whether source pixel and pattern of the graphic command are both colored;

a copying step, which performs a copy procedure for copying memory corresponding to the source pixel or the pattern, and converting 20 and expanding its color when the source pixel and the pattern are both colored; and

a graphic command executing step, which uses the 2D graphic device driver to set the command register of the graphic chip for executing the graphic command according to the copied source pixel or pattern, the

original source pixel or pattern, and the destination pixel.

2. The method as claimed in claim 1, wherein if the graphic command determining step determines that the source pixel and pattern of the graphic command are not both colored, the graphic command executing  
5 step is immediately performed.

3. The method as claimed in claim 1, wherein the graphic command is a ROP3 command.

4. The method as claimed in claim 1, wherein the copying step copies the source pixel to convert and expand color of the source pixel.

10 5. The method as claimed in claim 1, wherein the copying step copies the pattern to convert and expand color of the pattern.

6. A system for accelerating 2D graphics in a computer system, comprising:

a graphic chip having a command register to perform graphic  
15 commands, each graphic command having an operation of a source pixel, a pattern or a destination pixel; and

a 2D graphic device driver to set the command register of the graphic chip based on a graphic command transferred by a graphic device interface (GDI) of the computer system, such that the graphic chip performs  
20 the graphic command with respect to the command register set by the 2D graphic device driver,

wherein a copy procedure is performed to copy a memory corresponding to the source pixel or the pattern and convert and expand color of the source pixel or the pattern when the source pixel and pattern of

the graphic command received by the 2D graphic device driver are both colored, and the 2D graphic device driver sets the command register of the graphic chip to execute the graphic command according to the copied source pixel or pattern, the original source pixel or pattern, and the  
5 destination pixel.

7. The system as claimed in claim 6, wherein the graphic command is a ROP3 command.

8. The system as claimed in claim 6, wherein the copying procedure copies the source pixel to convert and expand color of the source pixel for  
10 display.

9. The system as claimed in claim 6, wherein the copying procedure copies the pattern to convert and expand color of the pattern for display.